

Green Sense 10/13/13

Checking for Home Air Leaks

As the daylight gets shorter and the air gets cooler, we're reminded that the cold weather will soon be joining us. Now is a good time to start to seal up your home and get it ready for those cold winter winds.

Air leaks can waste a lot of your energy dollars. One of the quickest energy-- and money-saving tasks you can do is caulk, seal, and weather strip all seams, cracks, and openings to the outside. But first you need to know where they are. The following are some tips from http://energy.gov/energysaver

Any doors leading from the outdoors or non-insulated areas (outside or garage) into the house can allow air leakage. By installing a door sweep to seal the gap at the bottom and weather-stripping on the sides and top, you can prevent your warm indoor air from escaping while blocking outside air from getting in. This helps keep your indoor living space comfortable and lowers your energy bills.

To check for leaks, first do a visual inspection.

On the outside of your home, inspect all areas where two different building materials meet, including:

- All exterior corners
- Outdoor water faucets
- Where wires or pipes come out of the house
- Where siding and chimneys meet
- Areas where the foundation and the bottom of exterior brick or siding meet.

If you see any gaps or seams that should be sealed, mark them (you can use the blue tape that comes off easily, or a diagram) and measure them so you'll know the locations and how much sealant you will need.

When inspecting windows and doors:

- if you can rattle them when closed, that movement means possible air leaks.
- if you can see daylight around the frame, that means the door or window leaks.

Check if any caulking and weather stripping are applied properly, leaving no gaps or cracks, and are in good condition. Check exterior caulking around doors and windows, and see whether exterior storm doors and primary doors and mail slots seal tightly.

You can usually seal these leaks by caulking or weather-stripping them. Check any storm windows to see that they fit well. You can also cut down on heat loss through windows by installing low-cost plastic sheets over the windows (most hardware stores have window insulation kits).

Inside your home, inspect around the following areas for any cracks and gaps that could cause air leaks:

- Electrical outlets
- Switch plates
- Door and window frames
- Electrical and gas service entrances, cable TV, phone lines, pipes and wires
- Baseboards
- Foundation seals
- Fireplace dampers
- Attic hatches
- Wall- or window-mounted air conditioners
- Vents fans and dryer vents

If you have difficulty locating leaks, you can conduct a basic building pressurization test to increase infiltration through cracks and leaks, making them easier to detect:

- 1. Choose a cool, very windy day.
- 2. Shut all windows, exterior doors, and fireplace flues.
- 3. Turn on all exhaust fans that blow air outside, such as your clothes dryer, bathroom fans, or stove vents, and/or use a large window fan to suck the air out of your home.
- 4. Turn off all combustion appliances such as gas burning furnaces and water heaters if you're comfortable doing this (at a minimum, turning on all your exhaust fans will help depressurize your home).
- 5. Light an incense stick and pass it around the edges of common leak sites. Wherever the smoke wavers or is sucked out of or blown into the room, there's a draft. You can also use a damp hand to locate leaks any drafts will feel cool to your hand.

A night-time strategy to detect areas that may allow leakage is to shine a flashlight over all potential gaps while a partner observes the house from outside. Large cracks will show up as rays of light. This isn't a good way to detect small cracks.

Once you have found the leaks you are ready to seal them up. Look to future columns for tips on sealing and weather-stripping.

A column by Reading Climate Committee members Gina Snyder, Stephanie Anderberg and Michele Benson